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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

DOUBLELINE CAPITAL LP, et al.,

Plaintiffs,

-against-

ODEBRECHT FINANCE, LTD., et al.,

Defendants.

17-CV-4576 (DEH) (BCM)

OPINION AND ORDER

BARBARA MOSES, United States Magistrate Judge.

Plaintiffs DoubleLine Capital LP, DoubleLine Income Solutions Fund, and DoubleLine Funds Trust (collectively "plaintiffs" or "DoubleLine") allege that misstatements and omissions made by defendants Odebrecht, S.A. – Em Recuperação Judicial ("OSA"),[1] Construtora Norberto Odebrecht, S.A. ("CNO"), and Odebrecht Engenharia e Construção S.A. ("OEC") (collectively "defendants" or "Odebrecht") induced DoubleLine to purchase Odebrecht bonds at inflated prices. DoubleLine has pleaded claims under § 10(b) of the Securities Exchange Act of 1934, 15 U.S.C. § 78j(b), and SEC Rule 10b-5, 17 C.F.R. § 240.10b-5, against CNO and OEC; under § 20(a) of the Exchange Act, 15 U.S.C. § 78j(b), against OSA; and under state law, for fraud against CNO and OEC and for negligent misrepresentation against all defendants. *See* Third Amended Complaint ("TAC") (Dkt. 61) ¶¶ 302-27; *DoubleLine Cap. LP v. Construtora Norberto Odebrecht, S.A.*, 413 F. Supp. 3d 187, 224 (S.D.N.Y. 2019) ("*DoubleLine II*").

During discovery, plaintiffs proffered the Expert Report of Sanjay Unni, Ph.D. (the "Unni Report") (Dkt. 293-1) concerning loss causation and damages. Dr. Unni conducted an event study, from which he concludes that breaking news implicating Odebrecht in the long-running international bribery scheme underlying this action caused the prices of plaintiffs' Odebrecht bonds

[1] OSA is now known as Novonor S.A., but for the sake of consistency I continue to refer to it as OSA, as in past opinions.

to drop, thus establishing loss causation, and that the price declines attributable to those revelations are a reliable measure of the price inflation caused by the fraud, thus establishing plaintiffs' damages. *See* Unni Rep. at 3, ¶¶ 1-3.[2] Now before the Court is defendants' motion (Dkt. 291) to exclude Dr. Unni's report and testimony. After careful review of the parties' arguments, I conclude that the Unni Report meets the standards set out in Fed. R. Evid. 702 and *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). Consequently, the motion will be denied.

I. BACKGROUND

A. Facts

1. The Parties

Defendant OSA is a Brazilian holding company whose subsidiaries "conduct business in the construction, engineering, infrastructure, chemicals, utilities and real estate businesses in Brazil and throughout 27 other countries, including the United States." TAC ¶ 30. Defendant CNO, an OSA affiliate, was Latin America's "largest engineering and construction company," and "one of the largest such companies in the world." *Id.* ¶ 36. Plaintiffs are a group of affiliated investment advisors and funds in the United States. *Id.* ¶ 12-14. Between May 2013 and March 2015, plaintiffs purchased two debt securities issued by defendants' affiliate Odebrecht Finance, Ltd. and guaranteed by CNO, at prices close to par, TAC ¶¶ 12-14, 25-26, 230, namely, 7.125% notes due June 26, 2042 (referred to by Dr. Unni as the "7.125% Bond"), and 7.50% perpetual notes (the "7.50% Bond"; collectively, the "Subject Bonds"). *Id.* ¶¶ 25-26; Unni Rep. ¶¶ 14-15.

2. The Underlying Bribery Scheme

Between 2006 and 2014, defendants paid "at least $3.3 billion in bribes to government

[2] The Unni Report re-uses paragraph numbers 1-7. After the second ¶ 7, the numbering is consecutive.

officials in Brazil and at least 12 other countries" in order to win lucrative construction contracts. TAC ¶ 62. The then-CEO of OSA, Marcelo Odebrecht, later admitted that "between 0.5% and 2.0% of [OSA's] revenue was directed to illicit bribes." *Id.* ¶¶ 66-67. To further the scheme, defendants created a standalone OSA division "for the sole purpose of functioning as a 'bribe department' that made illicit payments to governmental officials in exchange for the receipt of lucrative public contracts by CNO." *Id.* ¶¶ 63-64. The "bribe department" concealed the payments for years, omitting them from CNO's and OSA's formal accounting records, where they would have been reflected in Odebrecht's financial results and reported to auditors. *Id.* ¶¶ 68-69.

3. Disclosure of the Scheme

In or around 2014, Brazilian authorities began investigating suspected corruption of another Brazilian multinational corporation, Petróleo Brazileiro S.A., better known as Petrobras. TAC ¶ 81. The investigation, initially covert, was called "Lava Jato" ("Operation Carwash"). *Id.* The authorities did not originally focus on Odebrecht. However, on June 19, 2015, Brazilian police arrested Marcelo Odebrecht, and "the fraud began to unravel." *Id.* ¶ 231. Plaintiffs allege that as a "direct result" of the "shocking news" of the arrest, the market price of Odebrecht's bonds declined sharply, *id.* ¶ 233, and kept falling (despite Odebrecht's efforts to mitigate the price damage by minimizing its culpability) as more facts emerged concerning the bribery scheme; prosecutors in other jurisdictions (including the United States) opened criminal investigations; Marcelo Odebrecht was criminally charged, resigned as OSA's CEO, and was sent to prison; and the bonds were downgraded by the major ratings agencies. *Id.* ¶¶ 239-64. Finally, on May 6, 2016, the Brazilian press reported that Marcello Odebrecht was "formally indicted" for his role in the bribery scheme, causing a further decline in the market price of plaintiffs' Odebrecht bonds. *Id.* ¶¶ 365-66.

As of June 18, 2015 – the day before Marcelo Odebrecht was arrested – DoubleLine held "a position of $37.000 million in face value of the 7.125% [B]ond," and "a position of $11.350

million in face value" of the 7.5% Bond. Unni Rep. ¶¶ 16-17. DoubleLine did not trade in either bond between June 19, 2015, and May 6, 2016. *Id*. Over that period, the price of the 7.5% Bond declined from $88.03 on June 18, 2015, to $29.75 on May 6, 2016 (a total decline of $58.28, or 66.2%). *Id.* ¶ 18. The price of the 7.125% Bond fell from $86.25 to $26.75 over the same period (a decline of $59.50, or 69.0%). *Id.* ¶ 19. DoubleLine sold all of the Subject Bonds by June 27, 2019. *Id*. ¶¶ 16-17.

B. Procedural History

Plaintiffs brought this action on June 17, 2017, alleging that defendants violated the federal securities laws and state law by selling bonds to United States investors, including DoubleLine, without disclosing Odebrecht's involvement in the bribery scheme or the ways in which it had falsified its books to conceal the scheme. On September 7, 2018, plaintiffs filed the TAC, which – as limited by *DoubleLine II*, 413 F. Supp. 3d at 224 – remains their operative pleading.

The elements of a private cause of action for violation of § 10(b) of the Exchange Act and Rule 10b-5 are: a material misrepresentation or omission, scienter, a connection with the purchase or sale of a security, reliance, loss causation, and damages. *Dura Pharm., Inc. v. Broudo*, 544 U.S. 336, 341-42 (2005); *accord DoubleLine II*, 413 F. Supp. 3d at 205 (citing *Kleinman v. Elan Corp., plc*, 706 F.3d 145, 152 (2d Cir. 2013)). As a result of prior motion practice, it has been established that defendants made all of the misrepresentations and omissions alleged in the TAC; that those misrepresentations and omissions were material; and that defendants made them with scienter. *See DoubleLine Cap. LP v. Odebrecht Fin., Ltd.*, 2022 WL 3029014, at *13 (S.D.N.Y. July 19, 2022) ("*DoubleLine III*").[3]

[3] On December 21, 2016, OSA entered into a plea agreement with the Eastern District of New York, in which it admitted to violating the anti-bribery provisions of the Foreign Corrupt Practices

However, plaintiffs must still prove, among other things, loss causation and damages. *DoubleLine III*, 2022 WL 3029014, at 12. To that end, plaintiffs proffered the Unni Report, dated November 7, 2022. Odebrecht responded with the Expert Rebuttal Report of David A. Smith, Ph.D., dated January 6, 2023 (the "Smith Report") (Dkt. 293-2), which critiques the Unni Report but does not offer any alternative conclusions as to either loss causation or damages. On June 5, 2023, defendants filed their motion to exclude the Unni Report, supported by a memorandum of law ("Def. Mem.") (Dkt. 292) that draws heavily on the Smith Report. On July 5, 2023, plaintiffs filed an opposition memorandum ("Pl. Mem.") (Dkt. 294), and on August 4, 2023, defendants filed a reply memorandum ("Def. Reply Mem.") (Dkt. 295.) The district judge has referred the motion to me pursuant to 28 U.S.C § 636(b)(1)(A) and Fed. R. Civ. P. 72(a). (Dkts. 288, 289.)[4]

C. Event Studies

Because a "tangle of factors" affect the price of a security, plaintiffs suing under § 10(b) and Rule 10b-5 must prove that defendants' misrepresentations or omissions do not simply "'touch

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Act; agreed to an independent compliance monitor to oversee its operations; and accepted a criminal penalty of $2.6 billion. TAC ¶ 272. The plea agreement included a stipulated "Statement of Facts" in which OSA admitted, in broad terms, that it and its co-conspirators paid approximately $788 million in bribes in association with more than 100 projects in twelve countries over 15 years, from 2001 through 2016 and, in return, received "ill-gotten benefits" of "approximately $3.336 billion." *See DoubleLine III*, 2022 WL 3029014, at *5. In the course of discovery, defendants were directed to turn over the documents they provided to prosecutors in the Eastern District of New York, but repeatedly refused to do so. They also refused, for the most part, "to provide any *other* discovery concerning the factual allegations that the district judge found sufficient to plead a cognizable securities fraud claim." *Id*. at *8 (emphasis in original). Plaintiffs sought sanctions. *Id*. at *12. On July 19, 2022, I imposed sanctions pursuant to Fed. R. Civ. P. 37(b)(2)(i) and (ii), directing that, "for purposes of this action," certain facts would be taken as established, including the facts necessary to establish that defendants made the alleged misrepresentations and omissions; that they were material; and that defendants acted with scienter. *Id*. at *13.

[4] Because *Daubert* motions are "nondispositive of the litigation," *Israel v. Springs Indus., Inc.*, 2007 WL 9724896, at *2 (E.D.N.Y. July 30, 2007), they are routinely determined by magistrate judges, subject to "clear error" review by the district judge. *Id*.; *accord BS BIG V, LLC v. Philadelphia Indem. Ins. Co.*, 2022 WL 4181823, at *2 (S.D.N.Y. Sept. 13, 2022); *Pac. Life Ins. Co. v. Bank of New York Mellon*, 571 F. Supp. 3d 106, 111 (S.D.N.Y. 2021).

upon' a loss [but] *cause* a loss[.]" *Dura*, 544 U.S. at 343 (emphasis in original). To prove loss causation, a plaintiff "must show 'a sufficient connection between [the fraudulent conduct] and the losses suffered[.]'" *In re Omnicom Grp., Inc. Sec. Litig.*, 597 F.3d 501, 510 (2d Cir. 2010) (quoting *Lattanzio v. Deloitte & Touche LLP*, 476 F.3d 147, 157 (2d Cir. 2007)) (alterations in original). Similarly, to prove damages, a plaintiff must show "the extent to which" the price of the security at issue was inflated due to the fraudulent conduct. *In re Vivendi, S.A. Sec. Litig.*, 838 F.3d 223, 253 (2d Cir. 2016). To meet these challenges, plaintiffs commonly look to expert opinions based on event studies, which "seek[] to isolate various 'events' and thereby determine [the] relationship between the alleged [corrective] disclosure, the misstatement, and the share price decline." *Sciallo v. Tyco Int'l Ltd.*, 2012 WL 2861340, at *3 (S.D.N.Y. July 9, 2012) (internal citations omitted).

In an event study, an expert attempts to determine the extent to which the changes in the price of a security result from specific events (such as the disclosure of previously-concealed negative information about a company) and the extent to which those changes result from other factors, whether macro-economic or firm-specific. *Vivendi*, 838 F.3d at 253; *Bricklayers & Trowel Trades Int'l Pension Fund v. Credit Suisse Sec. (USA) LLC*, 752 F.3d 82, 86 (1st Cir. 2014). "An event study has four parts: defining the event (*e.g.,* an earnings announcement), establishing the announcement window (*i.e.,* the period over which stock price changes are calculated), measuring the expected return of the stock, and computing the abnormal return (which is the actual return minus the expected return)." *Carpenters Pension Tr. Fund of St. Louis v. Barclays PLC*, 310 F.R.D. 69, 80 (S.D.N.Y. 2015). At the fourth step, the expert compares the expected return with the actual return in the event window in order to determine the probability that an abnormal return of that magnitude could have occurred by chance. *See Bricklayers*, 752 F.3d at 86-87. If this probability

is small enough, the expert can reject the hypothesis that normal market fluctuations, as opposed to the company-specific events, explain the price movement. *Id.*

"The use of an event study to calculate artificial inflation is widely recognized and endorsed by courts." *Set Cap. LLC v. Credit Suisse Grp. AG*, 2023 WL 2535175, at *6 (S.D.N.Y. Mar. 16, 2023) (collecting cases); *see also In re Barclays Bank PLC Sec. Litig.*, 2017 WL 4082305, at *21 (S.D.N.Y. Sept. 13, 2017) ("Event studies are now 'standard operating procedure in federal securities litigation.'") (quoting *Vivendi,* 838 F.3d at 253-54), *aff'd*, 756 F. App'x 41 (2d Cir. 2018), *as amended* (Nov. 20, 2018). Whether any particular event study is sufficiently reliable to be accepted as the basis of expert opinion testimony, however, is a question for the Court, exercising its gatekeeping function under Rule 702 and *Daubert*. *Vivendi*, 838 F.3d 223 at 253.

D. Dr. Unni's Event Study

Dr. Unni holds a doctorate in economics with a specialty in financial markets. He has published research in peer-reviewed journals, presented at leading academic conferences, and taught university courses on financial markets and derivatives, including most recently in the MBA program at the University of California, Berkeley. Unni Rep. at 2, ¶¶ 1-3. He has been qualified as an expert regarding securities trading and valuation by both federal and state courts in the United States, and has also testified before foreign courts and arbitration panels. *Id*. Ex. A.

Plaintiffs asked Dr. Unni "to determine economic damages suffered by DoubleLine due to its purchase of the Subject Bonds and the price inflation attributable to Odebrecht's Improper Conduct," that is, defendants' concealment of the bribery scheme. Unni Rep. at 3, ¶ 7. To perform that task, Dr. Unni first measures the returns of the 7.125% Bond and the 7.5% Bond each day from June 19, 2015, when Marcelo Odebrecht was arrested, through May 6, 2016, when he was indicted (the "Relevant Period"). He begins with the daily closing prices of the Subject Bonds each

day they were traded, as reported in FINRA's Trade Reporting and Compliance Engine (TRACE) data, and computes the daily return of each Subject Bond as the percentage change in its "dirty" price from the prior trading day. Unni Rep. ¶ 51.[5] He then compute[s] the return on the Subject Bond Portfolio as a weighted average of the returns of each Subject Bond[], with the market values of DoubleLine's holdings of these bonds on the prior date serving as the weights." *Id*. ¶ 53.

Next, Dr. Unni identifies a benchmark index (that is, a "portfolio of bonds with valuation attributes similar to those of the Subject Bond Portfolio") for use in measuring the expected returns of the Subject Bonds in the absence of the news being analyzed. Unni Rep. ¶ 55. The purpose of the benchmark is to help the researcher disentangle the effect of the events he is studying from "larger macroeconomic trends" that likely affect all of the securities included in the index. *Id*. Noting that bonds have "different economic attributes" from common stock, *id*. ¶ 39,[6] Unni focused on two valuation properties: the credit rating of the bonds and their remaining time to maturity. *Id*. ¶ 56. These are the two factors "typically controlled for" by researchers measuring abnormal bond performance. Bessembinder, *Measuring*, at 4233. Thus guided, Dr. Unni selected

[5] The Subject Bonds paid interest on contractually-specified dates. However, "on days between two coupon dates, the price of a corporate bond is quoted [in the TRACE data] as a 'clean' (or 'flat') price, which does not reflect the accrued interest on the bond since its last coupon date." Unni Rep. ¶ 49. Thus, Dr. Unni, like other researchers working with TRACE data, is required to "add to this clean price the accrued interest associated with the Subject Bond that day," to arrive at what market professionals call the "dirty" price that the buyer actually pays. *Id*. ¶ 51; *see also* Hendrik Bessembinder et al., *Measuring Abnormal Bond Performance*, 22 Rev. of Fin. Stud. 4219, 4224 (2009) (hereinafter, "*Measuring*") ("The price information contained in TRACE reflects the 'clean' price. Accrued interest is then added to reflect the full or 'dirty' price paid at settlement.")

[6] Dr. Unni explains: "Bonds typically provide investors with a series of contractually stipulated payments through a specified maturity date. By contrast, equity represents a residual, and therefore variable, claim on the firm's cash flows after operating expenses and stipulated payments to bondholders have been met. Any meaningful change in the firm's cash flow prospects can affect the residual cash flows available to equityholders and therefore affect the value of the company's shares. However, the potential payments to bondholders will be affected only if the change in cash flow prospects is sufficient to put the bond's contractual payments at risk, or to alter the existing level of this risk." Unni Rep. ¶ 39.

two versions of JP Morgan's Corporate Emerging Markets Bond Index (CEMBI): (i) the CEMBI Broad Diversified BBB index ("CEMBI BBB") for BBB rated bonds, which Dr. Unni describes as "the closest ratings-matched index for the Subject Bonds prior to February 17, 2016," *id.* ¶ 58, and (ii) the CEMBI Broad Diversified High Yield index ("CEMBI HY") thereafter (collectively the "Benchmark Indices"). *Id.*[7]

As to suitability of the indices, Dr. Unni explains that they "track[] the total returns of US dollar-denominated bonds issued by corporate entities in emerging markets, including Latin America." Unni Rep. ¶ 57. He adds that the CEMBI Broad Diversified index "is a widely used index for emerging market debt" and has been described by industry insiders "as the 'flagship index for emerging market corporate bonds[]' [and] as 'the most widely followed [emerging markets] corporate index by investors.'" *Id.* n.59.

Having measured the daily returns of the Subject Bonds and identified suitable benchmark indices, Dr. Unni next establishes criteria to determine whether the differences between the measured returns and the benchmark returns (the "abnormal returns") are both statistically significant *and* likely caused by disclosures of the Improper Conduct. Here, Dr. Unni applies "a standard t-test for statistical significance," Unni Rep. ¶ 61, and identifies 44 days during the Relevant Period with abnormal returns that were statistically significant at the 95% confidence interval. *Id.* ¶ 61 & Ex. 4. He does not, however, attribute all statistically significant abnormal returns during this period to the fraud revelations. In order to quantify "how revelations regarding Odebrecht's Improper Conduct affected the value of the Subject Bond Portfolio," Dr. Unni

[7] Prior to February 17, 2016, the Subject Bonds were rated BBB- by Standard and Poor's (S&P), "within the BBB class of ratings." Unni Rep. ¶ 58 & n.60. On February 17, 2016, S&P downgraded them "below investment grade to BB+." *Id.* ¶ 58. Around the same time, Moody's and Fitch followed suit. *Id.* ¶¶ 27-28, 58.

"examined electronic databases of historical news and publications for all instances of news that related specifically to Odebrecht's Improper Conduct during the Relevant Period." *Id.* ¶ 63. He disregards abnormal returns "on dates when news regarding the Lava Jato investigation did not specifically mention Odebrecht," even if the abnormal returns were statistically significant on those dates. *Id*. He also disregards abnormal returns on dates when "the news related to broader developments in the Brazilian economy." *Id.*

Applying this method, Dr. Unni identifies nineteen days with both "a statistically significant weighted average abnormal bond return, either positive or negative," and "either partial disclosures or materializations of risk related to the Bribery Scandal." Unni Rep. ¶ 66. The report concludes by summing the abnormal returns on these nineteen days to arrive at a damages estimate of $17,307,000. *Id.* ¶ 89.

II. ANALYSIS

A. Legal Standard

Rule 702 provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. "[T]he proponent of expert testimony must show its admissibility by a preponderance of the evidence." *Lippe v. Bairnco Corp.*, 288 B.R. 678, 700 n.6 (S.D.N.Y. 2003).[8]

In *Daubert*, 509 U.S. at 597, the Supreme Court emphasized the "gatekeeping role" of district courts with respect to expert testimony, explaining that the Rules of Evidence – and Rule 702 in particular – "assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Id.*; *see also Troublé v. Wet Seal, Inc.*, 179 F. Supp. 2d 291, 302 (S.D.N.Y. 2001) ("[The] proffered testimony . . . must not only have a reliable foundation but also be relevant in that it 'fits' the facts of this case."). "The Rule 702 inquiry is a flexible one that depends upon the particular circumstances of the particular case at issue." *Sjunde AP-Fonden v. Gen. Elec. Co.*, 2023 WL 6314939, at *14-15 (S.D.N.Y. Sept. 28, 2023) (quoting *In re Gen. Motors LLC Ignition Switch Litig.*, 2016 WL 4077117, at *2 (S.D.N.Y. Aug. 1, 2016)); *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150-52 (1999) (because "there are many different kinds of experts, and many different kinds of expertise," a court must be granted "considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable").

An expert's analysis must be "reliable at every step," meaning that "*any* step that renders the analysis unreliable under the *Daubert* factors renders the expert's testimony inadmissible." *Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002) (quoting *In re Paoli R.R. Yard PCB Litig.,* 35 F.3d 717, 745 (3d Cir.1994)) (emphasis in original); *cf. In re Mirena* IUS *Levonorgestrel-Related Prods. Liab. Litig. (No. II)*, 982 F.3d 113, 123 (2d Cir. 2020) ("So long as 'an expert's analysis [is] reliable at every step,' it is admissible."). However, it is not the role of the

[8] Then "more likely than not" language was added to Rule 702 in 2023 "to clarify and emphasize" this point. Fed. R. Evid. 702, advisory committee's note to 2023 amendment.

court to determine whether the expert's conclusions are right or wrong. *In re Paoli*, 35 F.3d at 744 ("The evidentiary requirement of reliability is lower than the merits standard of correctness."). Thus, courts properly focus on the expert's "principles and methodology, not on the conclusions that they generate." *Daubert*, 509 U.S. at 595; *see also Amorgianos*, 303 F.3d at 266 (courts "focus on the principles and methodology employed by the expert, without regard to the conclusions the expert has reached or the district court's belief as to the correctness of those conclusions"). If there are flaws in an expert's reasoning, only flaws "large enough" such that "the expert lacks 'good grounds' for his or her conclusions" should lead to a court excluding evidence. *Amorgianos*, 303 F.3d at 267 (quoting *In re Paoli*, 35 F.3d at 746); *see also Lickteig v. Cerberus Cap. Mgmt., L.P.*, 589 F. Supp. 3d 302, 330 (S.D.N.Y. 2022) ("In light of the liberal admissibility standards of the Federal Rules of Evidence, exclusion of expert testimony is warranted only when the district court finds 'serious flaws in reasoning or methodology.'") (quoting *In re Fosamax Prods. Liab. Litig.*, 645 F. Supp. 2d 164, 173 (S.D.N.Y. 2009)).

Ultimately, "expert testimony should be excluded if it is speculative or conjectural . . . or if it is based on assumptions that are so unrealistic and contradictory as to suggest bad faith, or to be in essence an apples and oranges comparison." *Boucher v. U.S. Suzuki Motor Corp.*, 73 F.3d 18, 21 (2d Cir. 1996) (internal quotation marks omitted). The Court should not "admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

By contrast, "other contentions that the assumptions are unfounded go to the weight, not the admissibility, of the testimony." *Boucher*, 73 F.3d at 21 (internal quotation marks omitted). Thus, "if an expert's testimony falls within 'the range where experts might reasonably differ,' the duty of determining the weight and sufficiency of the evidence on which the expert relied lies with

the jury, rather than the trial court." *Lickteig*, 589 F. Supp. 3d at 330 (quoting *Kumho Tire*, 526 U.S. at 153). "[T]he traditional and appropriate means of attacking shaky but admissible evidence" are not exclusion, but rather "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof." *Daubert*, 509 U.S. at 596. Moreover, "exclusion remains the exception rather than the rule." *In re Gen. Motors*, 2016 WL 4077117, at *2 (internal quotation marks omitted); *see also* Fed. R. Evid. 702, advisory committee's note to 2023 amendment ("[O]nce the court has found it more likely than not that the admissibility requirement has been met, any attack by the opponent will go only to the weight of the evidence."). Accordingly, "[i]n a close case, a court should permit the testimony to be presented at trial, where it can be tested by cross-examination and measured against the other evidence in the case." *Lippe*, 288 B.R. at 700 n.6; *accord Crawford*, 2015 WL 13703301, at *2.

B. Application

Defendants do not challenge Dr. Unni's qualifications. Nor do they argue that his proposed expert testimony is irrelevant to this action or unnecessary to assist the finder of fact in assessing causation and damages. Instead, they contend that his proposed testimony is unreliable, raising two main challenges: (1) that Dr. Unni selected unreliable benchmark indices; and (2) that he failed to control for extraneous ("confounding") factors in his analysis. Def. Mem. at 10-16. Defendants further assert that Dr. Unni's analysis suffers from three "additional methodological errors," namely: (a) a "non-standard approach to constructing the Subject Bond Portfolio"; (b) "unsupported assumptions in his approach to calculating statistical significance"; and (c) a "failure to correct for multiple testing hypotheses." Def. Mem. at 16-17. I address each challenge in turn.

1. Benchmarks

The parties agree that it is accepted methodology in an event study to use a benchmark index to approximate the performance of the securities at issue "but for" the corrective disclosure

of the alleged fraud. But they disagree as to whether the indices selected by Dr. Unni are appropriate to benchmark the Subject Bonds. According to defendants, an event study's reliability "demands the selection of a benchmark composed of securities that closely resemble the securities at issue." Def. Mem. at 10. The Unni Report should be excluded, they say, because the CEMBI BBB and the CEMBI HY indices include bonds issued by companies operating outside of the construction industry and outside of Latin America, making them "so far afield of the industry and region where Defendants[] operate that they simply cannot perform their intended function." Def. Mem. at 10-11.

Dr. Smith explains that, as of January 2015, 33% of Odebrecht's planned construction projects were located in Brazil, and 22% in Venezuela, whereas "only approximately 5 percent to 12 percent of the bonds in the Benchmark Indices came from Brazil, and virtually none came from Venezuela[.]" Smith Rep. ¶ 18 & Ex. 1. Dr. Smith argues that "major economic crises in Brazil and Venezuela during the Relevant Period – such as Brazil's recession in 2015 to 2016, or Venezuela's 17 percent GDP contraction and 255 percent inflation rate in 2016 – would have likely had little effect on the Benchmark Indices even though such events would have a large effect on expectations regarding Odebrecht's ability to repay the Subject Bonds." *Id*. In addition to missing the mark on Brazil and Venezuela, defendants say, Dr. Unni's benchmarks improperly "sweep in a broad range of securities of companies from completely different industries – Financials and Technology, Media & Telecom," whereas Odebrecht was primarily engaged in the construction industry. Def. Mem. at 11. Region and industry matter, according to defendants, "[b]ecause the Subject Bonds were expected to be paid using [Odebrecht's] cash holdings or future cash flows from ongoing operations," and the industries and regions it operated in are "important factors when estimating a firm's cost of debt, which in turn reflects the riskiness and expected returns of a firm's

bonds – factors integral to their price at any given time." Def. Reply Mem. at 2. Thus, defendants conclude, "the benchmark indices and the Subject Bonds cannot reliably be expected to react similarly to market news[.]" Def. Mem. at 12. However, defendants do not point to any case law or academic literature requiring that the benchmarks used in an event study regarding corporate bonds be matched geographically, or by industry, with the subject bonds.

Defendants further argue that, while there is "some relationship between the movements of the Subject Bonds and the benchmarks," it is "a weak one at best." Def. Mem. at 12. By Dr. Smith's calculations, the correlation coefficient between the Subject Bonds and Dr. Unni's selected benchmarks during the year prior to the Relevant Period was "only 0.31 (on a scale of -1.0 to 1.0, where -1.0 represents perfect inverse correlation, 1.0 represents perfect positive correlation, and zero represents the absence of any linear correlation)." *Id*. Dr. Smith further calculates that the correlation coefficient during the Relevant Period is "0.26 on days that a return is reported for both the Benchmark Indices and Subject Bond Portfolio and excluding days on which the Unni Report finds Subject Conduct News." Smith Rep. at ¶ 22 n.34. According to Dr. Smith, "[s]uch low correlation during the Estimation Period indicates that the Benchmark Indices are not a reliable indicator of what the Subject Bond Portfolio was 'likely to have experienced on a given day in the Relevant Period, absent the arrival of new information regarding the Improper Conduct.'" Smith Rep. ¶ 23 (quoting Unni Rep. ¶ 54). "These figures," according to defendants, "demonstrate that the indices that Dr. Unni chose are not benchmarks for the Subject Bonds at all," Def. Mem. at 13, requiring that his testimony be excluded as unreliable. *Id*. Here again, however, defendants do not point to any case law or academic literature quantifying an acceptable correlation coefficient for the index used to benchmark the subject security in an event study. Nor do they identify any bond

indices which, in their view, would serve as better benchmarks for the Odebrecht event study than the CEMBI BBB and CEMBI HY.

Plaintiffs, for their part, characterize defendants' challenges to Dr. Unni's choice of benchmarks as "quibbles." Opp. Mem. at 1. They assert that his decision to benchmark the Subject Bonds against emerging market bond indices matched by credit rating and maturity was "in compliance with the standard practices described in two peer-reviewed articles," *id*. at 7,[9] and note that Dr. Smith offers nothing but his own "differing opinion" in favor of an industry-focused or region-focused approach. *Id*. Moreover, plaintiffs argue, an index limited to construction contractors in Brazil and Venezuela (if one existed) would "improperly skew the results in [defendants'] favor," because the entire sector was "embroiled in the Lava Jato scandal," such that the index would likely move "in tandem with the price of the Odebrecht Notes," falsely implying that the bribery revelations had no effect whatsoever on that price. *Id*. at 7-8. Similarly, plaintiffs argue, Dr. Smith's focus on the "purported lack of correlation" between the CEMBI indices and the Odebrecht Notes is a "red herring," in that he "offers no authority beyond *ipse dixit* for the proposition that correlation with the benchmark index is required for reliability," *id*. at 8, and the "standard methodology" does not demand it. *Id*.

Dr. Unni's use of the CEMBI BBB and CEMBI HY indices does not render his report unreliable. Both the academic literature and the (admittedly sparse) case law regarding event studies for corporate bonds bear out his focus on credit rating and time to maturity as the key

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[9] *See* Bessembinder, *Measuring*, at 4233 ("The two primary risk factors that are typically controlled for are default risk (proxied by bond rating) and time-to-maturity"); Louis Ederington et al., *Bond Market Event Study Methods*, 58 J. of Banking & Fin. 281, 282 (2015) (noting that in the "seminal paper" on bond market event studies, the authors recommend "using value-weighted rating/maturity benchmarks"); *id.* at 283 (explaining how to calculate abnormal bond returns as compared to "a benchmark rating/maturity marched portfolio").

valuation properties to be matched when choosing a benchmark index. As Dr. Unni notes, bonds have different economic attributes from stocks. Unni Rep. ¶ 39. Changes to corporate bond prices are "most often a function of only three [] factors: changes in risk-free Treasury rates of interest, changes in risk premiums for similar-risk corporate bonds, and changes in the company's likelihood of default on its obligations." Michael Hartzmark et. al., *Fraud on the Market: Analysis of the Efficiency of the Corporate Bond Market*, 2011 Colum. Bus. L. Rev. 654, 669-70 (2011). Hence, "the methodology utilized for [event studies of] stocks cannot simply be applied to bonds." Daniel Maul, et al., *The Bond Event Study Methodology Since 1974*, 48 Rev. of Quant. Fin. Acct'g 749, 749 (2017) (hereinafter "*Bond Event Study Methodology*").

A conventional equity event study typically uses "a broad index of other stocks' returns on each date considered in the event study or an index of returns of other firms engaged in similar business (since firms engaged in common business activities are likely to be affected by similar types of information)." Jill E. Fisch et. al., *The Logic and Limits of Event Studies in Securities Fraud Litigation*, 96 Tex. L. Rev. 553, 571 (2018) (hereinafter "*Logic and Limits*").[10] But in the world of debt securities – and regardless of whether the researcher constructs a bespoke "control portfolio" or uses a pre-existing bond index – the benchmark is typically matched to the subject bonds based on rating category and time to maturity. *See* Maul, *Bond Event Study Methodology*,

[10] *See*, *e.g.*, *Barclays Bank*, 2017 WL 4082305, at *24 (denying *Daubert* motion and admitting event study where expert's "control index" appropriately included "peer banks"), *aff'd*, 756 F. App'x 41 (2d Cir. 2018), *as amended* (Nov. 20, 2018); *RMED Int'l, Inc. v. Sloan's Supermarkets, Inc.*, 2000 WL 310352, at *9 (S.D.N.Y. Mar. 24, 2000) (denying *Daubert* motion and admitting expert report comparing the price of Sloan's stock against an index of supermarkets "reasonably similar to Sloan's"), *aff'd*, 2000 WL 420548 (S.D.N.Y. Apr. 18, 2000); *In re Xerox Corp. Sec. Litig.*, 746 F. Supp. 2d 402, 409 (D. Conn. 2010) (denying motion to exclude expert's event study that "regressed the daily returns on Xerox stock on the daily returns of the Bloomberg S & P 500 stock price index and on the daily returns of the S & P Technology Hardware Equipment index").

at 774 (surveying dozens of bond event study models).[11] Indeed, although a handful of researchers have considered whether "the matched portfolio approach benefits from additional classification categories, *e.g*., firm size and industrial classification[,]" *id*. at 775, the answer "remains unclear." *Id*. Unsurprisingly, therefore, defendants do not cite any cases rejecting a corporate bond event study for failure to use an industry- or region-specific bond index. *Cf. In re Winstar Commc'ns Sec. Litig*., 290 F.R.D. 437, 448-49 & n.14 (S.D.N.Y. 2013) (criticizing event study that benchmarked Winstar's "high yield" bonds against the Lehman U.S. Bond Composite Index, because it is an "investment grade" bond index). Since Dr. Unni's selection of benchmarks was made in accordance with "principles generally accepted within the relevant field," *Sloan's Supermarkets,* 2000 WL 420548, at *2, and since Dr. Smith's critique is ungrounded in the relevant literature or case law, I conclude that Dr. Unni's failure to find (or construct) a bond index matched to Odebrecht by geography and industry does not render his analysis unreliable.

Nor has the Court located any authority, outside of Dr. Smith's expert report, for the conclusion that "a highly correlated benchmark is critical" to an event study for a corporate bond. Def. Mem. at 13. In *Sloan's Supermarkets*, the court was untroubled by the fact that there was "no statistical linear relationship between the movement of the Index and the price of Sloan's common stock during the Class Period." 2000 WL 310352, at *9. Here, by way of contrast, there is a positive correlation, calculated by Dr. Smith as 0.31 prior to the Relevant Period, and 0.26 during the Relevant Period (excluding news days). Smith Rep. ¶ 22 n.34. While defendants characterize this relationship as "weak," Def. Mem. at 12, academic researchers recognize that a correlation coefficient in this range is "highly statistically significant," because it is "many multiples of [the

[11] Dr. Smith concedes that "the papers cited by the Unni Report do not consider geography or industry when selecting benchmarks," Smith Rep. ¶ 16 n.23, and does not identify any contrary authority.

index's] estimated standard error," and therefore useable in an event study. Frisch, *Logic and Limits*, at 582-83 (relying in part on an energy index, with a coefficient of approximately 0.2, to benchmark Halliburton's stock price returns). Once again, therefore, I conclude that defendants' challenge to Dr. Unni's selection of benchmarks "go[es] to the weight and credibility of [his] testimony, not its admissibility." *Sloan's Supermarkets*, 2000 WL 420548, at *2; *see also In re Lawrence*, 2008 WL 6786807, at *4 (Bankr. N.D.N.Y. Nov. 18, 2008) ("The question of [the expert's] use of the Bloomberg index goes to the weight of the evidence but not its admissibility."); *Monroe Cnty. Emps.' Ret. Sys. v. Southern Co.*, 2019 WL 2482399, at *4 (N.D. Ga. June 12, 2019) (recognizing that "at times, experts will disagree as to the best index to use in an event study," and refusing to exclude expert testimony due to a disagreement over indices).[12]

2. Confounding Factors

Defendants next challenge Dr. Unni's event study for failing to "account for factors that affect the price of the relevant securities *other* than the disclosure of the alleged fraud." Def. Mem. at 14 (emphasis in original). Dr. Unni makes no effort, they say, "to disentangle the effects (if any) that the alleged corrective disclosures had on the price of the Subject Bonds during the Relevant Period from the effects of the many confounding factors in play at that time." *Id*. Going further,

[12] Defendants rely heavily on cases involving securities other than corporate bonds, including *In re Exec. Telecard Ltd. Sec. Litig.*, 979 F. Supp. 1021, 1027 (S.D.N.Y. 1997), in which the court excluded expert damages testimony concerning the price of EXTL stock, in part because the expert compared EXTL to the S&P Telecom Index "rather than a more precisely correlated portfolio of securities." *See* Def. Mem. at 11; Def. Reply Mem. at 7. That reliance is misplaced. Not only was EXTL a common stock; it was a highly volatile "small cap" telecom stock that, according to the court, did not even trade based on "reported earnings per share," like stocks issued by more established firms, "but instead move[d] in accordance with the market's expectations and perceptions of its long term economic prospects." *Id*. at 1027 n.3. Moreover, the most glaring flaw in the expert's approach – and the primary reason for the exclusion of his report – was that he never conducted a true event study at all. While he attempted to distinguish between company-specific influences and general market influences on the price of EXTL's stock, he failed entirely to "distinguish between fraud related and non-fraud related company specific influences." *Id*. at 1026. This issue is discussed in Part II.B.2.

defendants assert that Dr. Unni's approach is "exactly" like that of the experts whose reports were excluded in *In re Williams Sec. Litig.*, 496 F. Supp. 2d 1195 (N.D. Okla. 2007), *aff'd sub nom. In re Williams Sec. litigation-WCG Subclass*, 558 F.3d 1130 (10th Cir. 2009), and *In re N. Telecom Ltd. Sec. Litig.*, 116 F. Supp. 2d 446, 460 (S.D.N.Y. 2000). *Id*.

In *Williams*, however, the plaintiffs' expert, Blaine F. Nye, conspicuously failed to perform any event study at all before attributing the bulk of the losses experienced by WCG noteholders (in the midst of "an industry meltdown of historic proportions," 496 F. Supp. 2d at 1201) to fraud. Instead, he identified four "corrective disclosure dates" (beginning after the notes had already lost approximately 60% of their face value) and – without any further analysis – concluded that "the price inflation in the [notes] is a constant value and is equal to the sum of the drops in the prices of each of the [notes] from the four days used to measure the price inflation." *Id*. at 1272. As the court pointed out, the "corrective disclosures" identified by Dr. Nye were wholly unconnected to the alleged fraud, in that they contained no "material, new, company-specific and fraud-related information." *Id*. at 1269. Moreover, Dr. Nye identified no benchmarks and "performed no regression analysis, or even an analysis of statistical significance, to differentiate fraud-related effects from forces unrelated to the fraud." *Id*. Thus, "he did not conduct an event study in any sense in which that term is used in his profession." *Id*. at 1273.

Similarly, in *N. Telecom*, the plaintiffs' expert, John B. Torkelsen, never performed an event study. 116 F. Supp. 2d at 460. Torkelsen conceded at deposition that he had no opinion as to whether any of the allegedly misleading statements at issue affected the company's stock price, *id*. at 457, proposing instead to testify – without benefit of any event study or similar analysis –

about "what would have happened to [the] company's stock price if certain information had been disclosed." *Id*. at 461.[13]

Dr. Unni, by contrast, took "significant steps," in the course of performing his event study, to address confounding factors. Pl. Mem. at 9. He measured the returns of the Subject Bonds only on days when (i) the market received news "specifically related to Odebrecht's Improper Conduct," and (ii) the Subject Bonds experienced statistically significant abnormal returns, compared to the CEMBI indices. Unni Rep. ¶ 64. The purpose of the Benchmark Indices, as noted above, is to exclude the effect of "larger macroeconomic trends" (which could be expected to affect other emerging market debt securities similarly) on the price of the subject securities. *Id*. ¶ 55. In order to exclude other confounding factors (such as significant economic developments in Brazil), Dr, Unni:

> . . . examined electronic databases of historical news and publications for all instances of news that related specifically to Odebrecht's Improper Conduct during the Relevant Period. [He] disregard[ed] abnormal returns on dates when news regarding the Lava Jato investigation did not specifically mention Odebrecht, even if the abnormal returns on the Subject Bonds was statistically significant on this day. Likewise, [he] disregard[ed] dates on which the news related to broader developments in the Brazilian economy.

Unni Rep. ¶ 63. As a result of this process, Dr. Unni identified a total of 19 dates on which both criteria were satisfied; that is, "a statistically significant weighted average abnormal bond return, either positive or negative," and "either partial disclosures or materializations of risk related to the Bribery Scandal." *Id.* ¶ 64 & Ex. 19. He then describes the news he relied on for each of these

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[13] Eight years after *N. Telecom* was decided, Torkelsen pleaded guilty to perjury, admitting that although he testified for decades as an independent expert, some of the firms that hired him "secretly paid Torkelsen on a contingent basis and concealed the payment arrangement from the courts, the defendants and the absent class members." *See* Press Release No. 08-20, United States Attorney's Office, Central District of California (Feb. 28, 2008), available at https://www.justice.gov/archive/usao/cac/Pressroom/pr2008/020.html (last visited March 14, 2024).

dates and the corresponding abnormal price changes for each of the Subject Bonds. *Id.* ¶¶ 66-88. Given the efforts that Dr. Unni did make to exclude confounding factors, and the vast gulf between his work and the analyses rejected in *Williams* and *N. Telecom*, defendants' claim that he somehow ignored the very purpose of an event study – to disentangle the "tangle of factors" that affect the price of a security, *Dura*, 544 U.S. at 343 – is unsupportable.

Nor do defendants get much traction from their unsurprising observation that on some days, there were statistically significant abnormal returns for the Subject Bonds but no corrective disclosure concerning the Improper Conduct, while on other days there were corrective disclosures but no statistically significant abnormal returns. Def. Mem. at 15; *see also* Smith Rep. ¶¶ 57-63. It is true, as Dr. Smith asserts, that these findings indicate that "statistically significant abnormal returns can be caused by factors other than the Subject Conduct News." Smith Rep. ¶ 57. But this is a given in any event study. The purpose of the study is not to demonstrate that the events in question (here, defendants' corrective disclosures) are the only influence on the price of the security; it is to isolate the effect of those events insofar as possible. Here, Dr. Unni has reasonably attempted to do so by focusing only on days when the statistically significant abnormal returns coincided with (and therefore might have been caused by) corrective disclosures – and did *not* coincide with other significant economic news that could muddy the correlation. Thus, defendants have succeeded only in demonstrating that Dr. Unni properly *excluded* the dates on which there were either corrective disclosures but no statistically significant abnormal returns or abnormal returns but no corrective disclosures.[14]

[14] It is perhaps worth noting here that there are a number of potential explanations for the days on which there were corrective disclosures but no statistically significant abnormal returns. One possibility is that the disclosure did cause negative price movement but, at the same time, "some other factor [*i.e.*, a confounding event] operated in the opposite direction." Frisch, *Logic and*

Defendants do raise legitimate questions as to whether Dr. Unni properly applied his own criteria to the 19 trading days he ultimately included in his study. On four of those days, Dr. Smith shows, the news cycle included both corrective disclosures and "other news" concerning the Brazilian economy. For example, on June 19, 2015, the Subject Bonds showed a statistically significant abnormal return of -6.77%, which the Unni Report attributes to news of Marcelo Odebrecht's arrest. That same day, however, Brazil's labor ministry announced that the Brazilian economy experienced a net loss of 115,599 jobs in May, and Brazil's central bank released figures showing that economic activity had declined 0.84% from March to April, which was "worse than market expectations." Smith Rep. ¶ 64(a). "Brazilian financial markets dropped 0.98 percent following the release of this troubling macroeconomic news." *Id.* Similarly, on September 22, 2015, December 18, 2015, and May 2, 2016 – all days on which Dr. Unni attributed the Subject Bonds' statistically significant negative abnormal returns to corrective disclosures regarding the Odebrecht bribery scheme – there was also other news that, according to Dr. Smith, might have accounted for those returns. *Id.* ¶¶ 64(b)-(d); *see also* Def. Reply Mem. at 6-7.[15] From this, Dr.

Limits, at 612. Thus, the existence of days on which there was a corrective disclosure but no statistically significant abnormal return in no way undercuts Dr. Unni's thesis that defendants' corrective disclosures caused the price of the Subject Bonds to drop. *See also In re EQT Corp. Sec. Litig.*, 2022 WL 3293518, at *16 (W.D. Pa. Aug. 11, 2022) ("A statistically significant price adjustment following a corrective disclosure is evidence the original misrepresentation did, in fact, affect the stock price. The converse, however, is not true – the absence of a statistically significant price adjustment does not show the stock price was unaffected by the misrepresentation. Nor does it indicate that what price adjustment did occur must be attributed to 'random chance.'") (quoting *Rooney v. EZCORP, Inc.*, 330 F.R.D. 439, 450 (W.D. Tex. 2019)).

[15] On September 22, 2015, "the five-year CDS spread on Brazilian government debt rose 14 bps and Brazil's currency hit its lowest level against the dollar in two decades." Smith Repl. ¶ 64(b). On December 18, 2015, Brazil's Supreme Court authorized impeachment proceedings against President Dilma Rousseff; Finance Minister Joaquim Levy resigned (after Brazil's Congress passed a budget with a lower surplus than his target); and "Brazil's currency depreciated in the wake of these developments." *Id.* ¶ 64(c). And on May 2, 2016, economists downgraded their forecast for the Brazilian economy for 2016, projecting that the economy would contract by 3.89%,

Smith concludes that the Unni report improperly "assumes that 100% of the statistically significant abnormal returns on the Subject Bond Portfolio on days with Subject Conduct News is caused by the Subject Conduct," Smith Rep. ¶ 65, rendering "the results of the Unni Report's analysis unreliable." *Id*.

I disagree. When constructing an event study, researchers necessarily rely on their discretion, to some degree, not only in defining what constitutes relevant "news" but also in determining what news, on what days, meets their selection criteria. *Barclays Bank*, 2017 WL 4082305, at *24; *see also In re Teva Sec. Litig.*, 2021 WL 872156, at *33 (D. Conn. Mar. 9, 2021) ("No matter what date classification methodology an expert uses, there is likely to be some subjectivity involved."). While "[t]he events for study should be selected using criteria that are as objective as possible," *In re Countrywide Fin. Corp. Sec. Litig.*, 273 F.R.D. 586, at 618 & n.97 (C.D. Cal. 2009), "identifying news, categorizing which news is 'material,' and determining whether news should have a certain (albeit rough) magnitude of positive or negative influence on price are all subjective determinations," *id*., as to which reasonable minds may disagree. *Accord Barclays Bank*, 2017 WL 4082305, at *24; *McIntire v. China MediaExpress Holdings, Inc.*, 38 F. Supp. 3d 415, 429 (S.D.N.Y. 2014).

It is not unreasonable for Dr. Smith to suggest that the "other news" on September 22, 2015, including a drop of 0.98% in the Brazilian financial markets, was significant enough so that Dr. Uni should have excluded that date from his event study. By the same token, however, Dr. Unni's contrary decision is within the range "where experts might reasonably differ," *Kumho Tire*, 526 U.S. at 153, and therefore goes to "the weight, not the admissibility," of his causation and

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and "April data for the Brazilian Purchasing Managers' Index (PMI) compiled by Markit showed the PMI at a 7-year low and revealed that Brazil's manufacturing sector shed jobs in April at the fastest pace on record." *Id*. ¶ 64(d).

valuation opinion. *Barclays Bank*, 2017 WL 4082305, at *24; *see also Angley v. UTi Worldwide Inc.*, 311 F. Supp. 3d 1117, 1125 (C.D. Cal. 2018) ("While making a determination as to what was 'not newsworthy' would appear to include some subjectivity, analyzing what steps [an expert] took to minimize the subjectivity of the study in determining what was 'not newsworthy' go to weight, not admissibility."); *Carpenters Pension Tr. Fund*, 310 F.R.D. at 90 ("As a practical matter, researchers conducting event studies will often have to rely on subjective assessments. While this methodology may detract from the *weight* one might place on the results, it does not affect admissibility.") (emphasis in original); *McIntire*, 38 F. Supp. 3d at 429 (admitting event study, despite challenges to expert's identification of relevant news and classification of news days, in light of "the necessity of expert discretion that accompanies the classification of trading days in an event study analysis and the law's aversion to rigid standards of expert opinion admissibility"); *Sloan's Supermarkets*, 2000 WL 310352, at *8 ("even a statistical event study involves subjective elements").

The same is true with respect to the two "anomalies" that defendants identify in Dr. Unni's data. Defendants point out that on some days (including two of the 19 days that Dr. Unni included in his study), the Subject Bonds experienced "divergent returns," meaning that the price of the 7.125% Bond rose while the price of the 7.50% Bond fell (or vice versa). Def. Mem. at 14-15; Smith Rep. ¶ 51. According to Dr. Smith, "[t]he presence of divergent movements between the Subject Bonds indicates, at a minimum, that additional investigation is warranted to conclude that the changes in the prices of the Subject Bonds on any given day are caused by the Subject Conduct News and not other unrelated factors." Smith Rep. ¶ 50. Dr. Smith faults the Unni Report for "fail[ing] to account" for the divergent price movements, and, in particular, failing to rule out

potential explanations that would cast doubt on its overall conclusions, such as that the market for the subject Bonds was not efficient or that the price data Dr. Unni relies on is "not reliable." *Id.*

However, Dr. Smith does not otherwise suggest – and certainly does not make a serious attempt to argue – that the TRACE data upon which Dr. Unni (and virtually all academic researchers) rely for corporate bond prices is not accurate, or that the relevant market is not efficient. And while his suggestion that Dr. Unni further investigate the divergent returns may be sensible,[16] it is hardly grounds for excluding the Unni Report. *See Joint Stock Co. Channel One Russia Worldwide v. Infomir LLC*, 2021 WL 4810266, at *25 (S.D.N.Y. Sept. 30, 2021) (rejecting argument that expert evidence should be excluded because the challenged experts "did not perform the additional tests or examine the additional evidence that, in [the opposing party's] view, they should have"); *Dalton v. McCourt Elec. LLC*, 112 F. Supp. 3d 320, 329 (E.D. Pa. 2015) ("Even if conducting a particular test may have rendered the opinion 'more' reliable, that does not mean that without it, the opinion is unreliable.")

The second "anomaly" that defendants note is that on four occasions, the Subject Bonds experienced "offsetting returns" across two subsequent trading days (that is, a positive return on trading day 1 followed by a roughly equivalent negative return on trading day 2, or vice versa). Def. Mem. at 14-15; Smith Rep. ¶ 54 & Ex. 7. On three of these occasions, the second trading day – the day of the "offsetting" price movement – was a day that Dr. Unni included in his study. Smith Rep. Ex. 7. Dr. Smith states that this pattern suggests a "market correction," that is, "a temporary

[16] One possibility, as defendants suggest, is that "confounding factors [were] at play" on those days. Def. Reply Mem. at 9. Another possibility is that the differences in interest rate and/or maturity date between the two Subject Bonds caused them to react differently to the day's news. *See* Bessembinder, *Measuring*, at 4229 (noting that while "[e]arlier researchers" in academic studies "picked a representative bond for each firm in the sample," this approach could "bias the results" because "some events might have a more significant impact on bonds with the longest time to maturity").

dislocation of prices on one day that were corrected – or 'undone' – on the subsequent day." Smith Rep. ¶ 54. Therefore, he concludes, it would be a "mistake" for Dr. Unni to "assume without further investigation that the correction is caused by the Subject Conduct News and not a market correction, especially if the other Subject Bond does not experience a similar price movement." *Id*. ¶ 55.

However, Dr. Smith does not back up his premise (that offsetting returns on two subsequent dates "suggests" a correction) with any data. He does not, for example, state how "unusual" it is for bond prices to experience offsetting returns on subsequent days. *See* Smith Rep. ¶ 54. Nor does he examine the news on either day 1 or day 2 for alternative explanations. Once again, therefore, while Dr. Smith's recommendation that Dr. Unni further investigate this phenomenon is not unreasonable, defendants' critique does not seriously undermine either Dr. Unni's methods or his application of those methods to the data he used.

3. Additional Methodological Errors

Lastly, defendants point to three additional critiques raised by Dr. Smith and argue that, even if none of these asserted errors in Dr. Unni's method would be fatal standing alone, they "add up to the point where the analysis lacks the reliability to reach a jury." Def. Mem. at 16-17 (citing *Bricklayers*, 752 F.3d at 96). I conclude, however, that none of the asserted errors, singly or in combination, discredits Dr. Unni's opinion to the point of exclusion.

a. Constructing the Subject Bond Portfolio

As explained above, the Unni Report measures daily returns on the 7.125% Bond and the 7.5% Bond as a portfolio, weighted according to the relative value of DoubleLine's holdings of each Subject Bond. Unni Rep. ¶ 44. Dr. Smith argues that this is a "novel" approach," which "ignores available information" and is "unsupported by the academic literature," Smith Rep. ¶ 25, which recommends using a "portfolio of the firm's bonds weighted by the market value of each

outstanding issuance." *Id.* ¶ 26. Rather than limiting his study to the Subject Bonds themselves, Dr. Smith argues, Dr. Unni should have tracked the prices of *all* Odebrecht bonds and used the returns on *all* of them (weighted in proportion to the market value of each issue) to determine the daily effect (if any) of the corrective disclosures on the Subject Bonds. *Id.* ¶¶ 25-27. Had he done so, Dr. Smith explains, he would have obtained different results (at least for the two dates that Dr. Smith uses as examples). *Id.* ¶ 27 & Ex. 3.[17]

The short answer to this critique is that plaintiffs' damages, if any, must be measured by the fraud-caused losses to the securities they held. *Vivendi*, 634 F. Supp. 2d at 361 ("plaintiffs suffer a loss only when the shares *they possess* decline in value") (emphasis added). Losses to other securities, which plaintiffs did not possess, are simply irrelevant to their legal claims. Academic researchers, when trying to determine "firm-level effects" of various corporate events, do indeed prefer to look at all of a firm's outstanding bonds as a single portfolio, where "the firm's abnormal bond return is the value-weighted average of the abnormal returns to the different bond issues." Bessembinder, *Measuring*, at 4229-30; *see also* Ederington, *Bond Market Event Study Methods*, at 283 (adopting same approach for the purpose of "calculat[ing] firm returns when a firm has more than one bond outstanding"). But Dr. Unni is not trying to determine the "firm-level effects" of Odebrecht's corrective disclosures or the "firm returns" on Odebrecht bonds. He is trying to determine the effects of the corrective disclosures on the Subject Bonds. In this context, he explains, "it is appropriate to use the market value of DoubleLine's holdings of these bonds to construct the value-weighted return of the Subject Bond Portfolio." Unni Rep. ¶ 53 n.54. This does

[17] In addition to the 7.5% Bond (perpetual) and the 7.125% Bond (maturing 2042), Odebrecht had five lower-interest bonds with shorter maturities outstanding during the Relevant Period: a 5.25% bond maturing 2029; a 4.375% bond maturing 2025; a 6% bond maturing 2023; a 5.125% bond maturing 2022, and a 7% bond maturing 2020. Smith Rep. Ex. 3.

not appear to the Court to be an error. I note, in this regard, that defendants do not identify any case law suggesting that an event study prepared for the purpose of litigation should calculate the abnormal returns of *all* of the issuer's securities rather than the securities held by the plaintiffs.

b. Calculating Statistical Significance

Defendants next contend that the Unni Report's "assumption that the abnormal returns follow a normal distribution is incorrect," and therefore that "the Unni Report's methodology to determine statistical significance is prone to falsely identifying statistically significant events." Def. Mem. at 17. Dr. Smith argues that Dr. Unni's use of a t-test to identify the statistical significance of abnormal returns is inappropriate, because it assumes "that the abnormal returns follow a normal distribution," when in fact "financial returns generally are not normally distributed." Smith Rep. ¶¶ 39-40. Plaintiffs respond that "the use of a t-statistic to identify statistically significant abnormal returns is a standard methodology in event studies." Pl. Opp. Mem. at 13 (citing Frank Torchio, *Proper Event Study Analysis in Securities Litigation*, 35 J. Corp. L. 159, 162 (2009)). The case law appears to bear plaintiffs out on this point. *See, e.g.*, *In re EQT*, 2022 WL 3293518, at *16 n.14; *United States v. Gushlak*, 2012 WL 1379627, at *7 (E.D.N.Y. Apr. 20, 2012); *Fogarazzo v. Lehman Bros.*, 263 F.R.D. 90, 105 (S.D.N.Y. 2009). Consequently, while defendants may challenge Dr. Unni's methodology at trial, his use of the traditional t-test to determine statistical significance is not grounds for excluding his testimony.

c. Multiple Hypotheses

Lastly, defendants charge that Dr. Unni engaged in "multiple hypothesis testing," which is "problematic," when he tested the Subject Bonds' abnormal returns on 59 separate days to determine which abnormal returns were statistically significant. Def. Mem. at 17; Smith Rep. ¶¶ 43-46. It is true that "[t]he more tests one does while using the same critical value, the more

likely it is that at least one test will yield a finding of statistical significance at the stated significance level even when there truly was no price impact. More event dates means more bites at the same apple, and the odds the apple will be eaten up increase with the number of bites." Fisch, *Logic and Limits*, at 600. In this case, Dr. Smith estimates that "the likelihood that the Unni Report falsely identifies an abnormal return as statistically significant at least once in this example would be 95.15 percent." Smith Rep. ¶ 45.

In fact, Dr. Unni identified abnormal returns as statistically significant on 44 days during the relevant period. *See* Unni Rep. Ex. 4; Smith Rep. ¶ 51. And although Dr. Smith states that "many solutions exist" to correct for multiple hypothesis testing, Smith Rep. ¶ 46, he does not demonstrate any of those solutions, much less show how many fewer statistically significant abnormal returns would be identified after appropriate adjustments. I note as well that by testing each hypothesis the "nominal level," Dr. Unni took the "most common" approach to the problem of multiple tests. Joseph P. Romano et al., *Hypothesis Testing in Econometrics*, 2010 Ann. Rev. of Econ. 75, 76 (2010) ("The easiest, and most common, approach to deal with the problem of multiple tests is simply to ignore it and test each individual hypothesis at the usual nominal level."). If he erred in so doing, defendants can bring that to the jury's attention through cross-examination, and perhaps show that it resulted in an overstatement of plaintiffs' damages. Here again, however, defendants have failed to identify a flaw that is significant enough, either singly or in combination with the issues addressed above, to warrant exclusion of plaintiffs' expert evidence.

III. CONCLUSION

For the reasons, set forth above, the Court concludes that plaintiffs have shown that it is more likely than not that Dr. Unni's analysis is reliable at each step. Consequently, defendants' motion to exclude his testimony is DENIED.

Dated: New York, New York
March 14, 2024

SO ORDERED.

BARBARA MOSES
United States Magistrate Judge